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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,398	09/26/2006	Shiro Doshō	071971-0772	2149

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EXAMINER

LE, DINH THANH

ART UNIT	PAPER NUMBER
2816	

MAIL DATE	DELIVERY MODE
10/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/594,398

Applicant(s)

DOSHO ET AL.

Examiner

DINH T. LE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/26/06</u> | 6) <input type="checkbox"/> Other: ____ |

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DETAILED ACTION

Specification

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections

Claim Rejections - 35 USC § 112

Claims 2 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction or clarification is required.

In claim 2, the recitation "a reference voltage" on line 1 is confusing because it is unclear if this is additional "voltage" or further recitation of the previously claimed "voltage" on line 4 of claim 1.

In claim 11, the recitation "the input clock" on line 2 and "the number" on line 3-4 lacks clear antecedent basis. It is unclear where the input clock comes from, what is meant by "falling of the clock input" and how the generator circuit can generate the clocks base on this falling and how this limitation is read on the preferred embodiment or seen on the drawings.

The remaining claims are dependent from the above claims and therefore also considered indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 6 are rejected under 35 USC 102 (b) as being anticipated by Klemmer et al (US 6,420,917).

Klemmer et al discloses in Figure 4 a circuit comprising:

- a first capacitor (CR) provided between an input terminal for the current signal and a reference voltage (ground);
- a switched capacitor circuit (C1, Q1, Q2) provided between the input terminal and the first capacitor (CR); and
- a second capacitor (C2) provided in parallel to the first capacitor and the switched capacitor circuit.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 USC 103 (a) as being unpatentable over Lin et al (US 7,016,450) in view of Dosho et al (US 6,995,607).

- Regarding claims 1, 4, 6 and 10, Lin et al discloses in Figure 1 circuit comprising:
- a charge pump (20);

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- an VCO (26); and a filter circuit having:
- a first capacitor (CP) provided between an input terminal for the current signal and a reference voltage (ground);
- a resistor (Rp); and
- a second capacitor (C0) provided in parallel to the first capacitor and the switched capacitor circuit.

However, Lin et al does not disclose that the resistor (Rp) comprising a switch capacitor circuit as combined in claims 1 and 6.

Nevertheless, Dosho et al suggests in Figures 3 and 4A-4B a switched capacitor circuit comprising unmarked switches and capacitor C interconnected to function as a resistor (32) for reducing size, see lines 4-11, column 1 and lines 35-52, column 7.

It would have been obvious to a person having skill in the art at the time the invention was made to replace the resistor (RP) of Lin et al with the switch capacitor circuit as suggested by Dosho et al for the purpose of reducing size.

With regarding claims 2 and 7-8, although Dosho et al does not specify that the capacitance value of the second capacitor is larger than respective capacitances of the third and fourth capacitors; however, a skilled artisan realizes that the capacitances of the third and fourth capacitors of Dosho et al are determined by a predetermined resistance value of the resistor (R32) while the capacitance value of the capacitors (C0, CP) are determined by the operational frequency of the filter. Thus, selecting the optimum capacitance values for the capacitors (C0, CP) as claimed is considered to be a matter of a design expedient for an engineer. Lacking of showing any criticality, it would have been obvious to a person having skill in the art to select

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the optimum capacitance value of Lin et al as claimed for the purpose of accommodating with the operational frequency of the circuit.

Regarding claims 3, 5, 9 and 12, the MOS capacitor is suggested in Figure 5 of Dosho et al.


Regarding claim 11, wherein clock signals (CK, CK/) for controlling the switches in Figure 4B of Dosho et al are generated by an *inherent* clock signal generator.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DINH T. LE whose telephone number is (571) 272-1745. The examiner can normally be reached on Monday-Friday (8AM-7PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Richards, can be reached at (571) 272-1736.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DINH T. LE
PRIMARY EXAMINER